

Plans Examiner



Approved and Adopted by the
Office of State Fire Marshal



Recommended for adoption by the
Statewide Training and Education
Advisory Committee and the
State Board of Fire Services

CERTIFICATION TRAINING STANDARDS

Draft 6/30/2010





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FIRE MARSHAL CERTIFICATION TRAINING STANDARDS

Introduction

A Certification Training Standards (CTS) Guide is developed for each rank in the fire service -- fire fighter, driver/operator, fire instructor, fire officer, etc. The CTS Guide lists every responsibility a person is expected to complete and a student performance goal that includes a measurable minimum performance standard. In addition, a comprehensive list of reference resources is provided. The CTS Guide has several valuable uses:

1. It is the foundation for the certification programs recommended for adoption by the SBFS. Any certification program must be based upon job-related knowledge and measurable objectives.
2. It provides measurable minimum performance standards. The validity and reliability of fire service entrance and promotional examinations can be more easily defended when such measurable standards are utilized.

These performance standards will need to be augmented by additional training in order to master the knowledge and skills needed for specialized operations.

3. It lists a variety of reference resources that may be studied in order to enhance job performance. A student can be confident that any eventual testing will be based upon the authoritative resources being studied. It is this fostering of individual confidence and initiative, which may become the most important accomplishment of the CTS Guide.

Format

The following is the standardized format for a Certification Training Standards Guide.

Title

The title should be written as concise as possible and provides the first indication that the standard is cognitive, psychomotor, or both. This indication is accomplished by using corresponding verbs. A task title might be, "Describe and Demonstrate the Use of Ropes." This shows that there are both cognitive and psychomotor requirements.

Authority

Each CTS is keyed, when possible, to a subsection of the appropriate National Fire Protection Association (NFPA) Professional Qualifications. Because of this correlation between the CTS Guide and the NFPA standard, it can be said that each fire service position in California's certification system meets or exceeds the corresponding NFPA standard. In order to achieve this and satisfy the desired performance for California fire service personnel, a standard that the NFPA has designated for a particular level (Fire Officer V for example) may be included in



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California's Fire Officer requirements. Moreover, in some instances, because of repetition in the NFPA standard, several subsections might be cited for a single CTS.

In other instances, California may have a requirement that has been overlooked or neglected by the NFPA. When there is no NFPA subsection in the standard to cite, the authority requiring the standard, or a performance within the standard, is listed. In these cases, the authority cited is the State Fire Marshal and the requirements are printed in *italics*.

Level

Two levels of learning are used in a CTS Guide. These levels are defined as:

Level I: Knowledge

The ability to recall or recognition of previously learned material (facts, theories, etc.) in essentially the same form as taught. Students will be able to name, match, list, and identify a concept, principle, or object.

Level II: Comprehension

The ability to use information within a limited context, use abstractions in particular situations, and break information into its parts to clarify relationships. Students will be able to describe and demonstrate the use of an identified concept, principle, or object.

Performance Goal

The heart of the CTS Guide is contained in the performance goals. They attempt to specifically measure what a student knows or is capable of doing at the end of the instructional period by defining the amount of technical knowledge required or the skill of the psychomotor performance. The performance goal provides the instructor or testing agency with these guidelines.

1. What the student should be given to accomplish the CTS.
4. What the student should be able to accomplish.
5. How well the student should perform.
6. The authoritative reference resources being employed.

Given

Technically, the performance goal differs from a student behavioral objective (in a lesson plan) because the "Given" or "Condition" sections are not the same. In a behavioral objective, the "Condition" contains what the student is given at the time of testing. In a performance goal, the "Given" contains a block of information necessary for a student to study and accomplish the corresponding performance.



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1. Describe leadership styles, which at a minimum ***shall*** include:
 - Command presence
 - Concepts
 - Models
 - Theories

Performance

The "Performance" section of the performance goal lists, in detail, what a student must accomplish in order to satisfy the CTS. To cut down on the sheer size of the CTS Guide, the many details included in the "Performance" section precluded the necessity of writing a series of task analyses on closely related subjects. For example, when talking about leadership styles, it became possible to write:

Generally, but not always, each numbered item in the "Performance" is a job. Sometimes, however, many jobs are included in a single numbered item. In this case, each bullet represents a single job.

Standard

The "Standard" section of the performance goal identifies how the student will be evaluated. For cognitive requirements, the standard will be with a minimum 80% accuracy on a written exam. For psychomotor requirements, the standard will be by completing all operations on a performance test. In the cases where the CTS has both psychomotor and cognitive performance goals, the standard will list both the written exam and a performance test.

Learning Resources

A list of available authoritative reference resources supporting the performance goal.



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SECTION 1: ADMINISTRATION FOR THE PLANS EXAMINER

PLANS EXAMINER

SECTION 1: ADMINISTRATION

PE 1-1: DESCRIBE THE ROLE OF THE PLANS EXAMINER

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTIONS 7.2.1 THROUGH 7.2.4 AND 8.2. AND THE <i>STATE FIRE MARSHAL</i>
LEVEL:	II
REQUISITE KNOWLEDGE:	CODES AND STANDARDS, LEGAL REQUIREMENTS FOR PLAN REVIEW REPORTS, AND ACCEPTED PRACTICES, POLICIES, AND PROCEDURES OF THE JURISDICTION. (7.2.1) POLICIES AND PROCEDURES OF THE JURISDICTION REGARDING THE COMMUNICATION OF DISCREPANCIES, THE APPEALS PROCESS, AND CODES AND STANDARDS. (7.2.2) PLAN REVIEW POLICIES AND PROCEDURES OF THE JURISDICTION. (7.2.3) APPLICABLE CODES AND STANDARDS ADOPTED BY THE JURISDICTION, FORMAT OF CODES AND STANDARDS, INTERRELATIONSHIP OF CODES AND STANDARDS, AND PROCEDURES ADOPTED BY THE ORGANIZATIONS RESPONSIBLE FOR PROMULGATING THESE DOCUMENTS. (7.2.4)
REQUISITE SKILL:	THE ABILITY TO CONDUCT CODE-RELATED RESEARCH AND WRITE REPORTS. (7.2.1) THE ABILITY TO COMMUNICATE ORALLY AND IN WRITING. (7.2.2) THE ABILITY TO REVIEW APPLICATIONS FOR COMPLETENESS. (7.2.3) THE ABILITY TO CONDUCT CODE-RELATED RESEARCH, APPLY CODES AND STANDARDS, AND MAKE DECISIONS. (7.2.4)

PERFORMANCE GOAL

GIVEN:

1. A summary of terms that are commonly used by a Plans Examiner
2. A summary of the legally established responsibilities and empowerment related to the performance of the duties of a Plans Examiner
3. A summary of the jurisdictional organizations that have requirements or conduct plan reviews relating to life safety or fire prevention
4. A summary of the role of the Plans Examiner

PERFORMANCE: (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

1. Describe terms that are commonly used by a Plans Examiner
2. Describe legally established responsibilities and empowerment related to the performance of the duties of a Plans Examiner
3. Describe other jurisdictional departments or agencies that have requirements or conduct plan reviews relating to life safety or fire prevention, which may include:
 - Building Department
 - Health Department
 - Planning Department
 - Water Purveyor
4. Describe the role of the Plans Examiner, which at a minimum **shall** include:



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SECTION 1: ADMINISTRATION FOR THE PLANS EXAMINER

- Reviewing plans for fire and life safety
- Interpreting and applying applicable codes, standards, and policies of the jurisdiction
- Communicating with fire inspectors, emergency response personnel, and design professionals
- Conducting code related research
- Creating plan review checklists and forms
- Developing policies and procedures for the administration of plan review functions
- Evaluating alternative methods
- Facilitating resolution of design deficiencies
- Maintaining records
- Participating in legal proceedings
- Preparing correspondence and plan review reports
- Requesting additional expertise as required

STANDARD:

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy

SECTION 2: PLANS REVIEW

PE 2-1: DESCRIBE AND DEMONSTRATE EVALUATING PLANS THROUGH A REVIEW PROCESS

AUTHORITY:	THE STATE FIRE MARSHAL
LEVEL:	II

PERFORMANCE GOAL

GIVEN:

1. A summary of plan review policies and procedures of the jurisdiction
2. A summary of plans and specifications for conformance with applicable codes, standards, and policies of the jurisdiction
3. A summary of existing general site and building conditions for proposed use
4. A summary of the procedures to process required permits (construction or operational-use)
5. A summary of the procedures for approving a plans
6. A summary of how deficiencies are verified
7. A summary of the process for resolving deficiencies
8. A sample building plan or site plan

PERFORMANCE: (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

1. Describe plan review policies and procedures of the jurisdiction
2. Describe and demonstrate reviewing plans and specifications for conformance with applicable codes, standards, and policies of the jurisdiction
3. Identify and process required permits (construction or operational-use)
4. Describe the procedures for approving plans for new and existing conditions, which at a minimum **shall** include:
 - Agency-specific requirements
 - Allowable height and area
 - Construction type
 - Environmental documentation (wildland urban interface)
 - Means of egress
 - Occupancy classification
 - Original type of construction (existing)
 - Performance-based design
 - Practical difficulty
 - Resubmittal with alternate method of design
 - Site access
 - Systematic approach of review and corrective actions



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SECTION 2: PLANS REVIEW FOR THE PLANS EXAMINER

- *Water supply*
- 5. *Describe how deficiencies are verified, which at a minimum **shall** include:*
 - *Observed and documented*
 - *Reported in accordance with the policies of the jurisdiction*
- 6. *Describe the procedures for resolving deficiencies, which at a minimum **shall** include:*
 - *Referring to appropriate level when necessary*

STANDARD:

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy

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PE 2-2: DESCRIBE AND DEMONSTRATE DEVELOPING AND MAINTAINING PLAN REVIEW POLICIES AND PROCEDURES

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTIONS 7.2.4, 8.2.1, AND 8.2.2
LEVEL:	II
REQUISITE KNOWLEDGE:	<p>APPLICABLE DOES AND STANDARDS ADOPTED BY THE JURISDICTION, FORMAT OF CODES AND STANDARDS, INTERRELATIONSHIP OF CODES AND STANDARDS, AND PROCEDURES ADOPTED BY THE ORGANIZATIONS RESPONSIBLE FOR PROMULGATING THESE DOCUMENTS (7.2.4)</p> <p>PLAN REVIEW ELEMENTS REQUIRED BY CODES, STANDARDS, POLICIES, AND PROCEDURES OF THE JURISDICTION (8.2.1)</p> <p>LEGAL REQUIREMENTS AND THE VARIOUS SYSTEMS OF GOVERNMENT THAT AFFECT THE PLAN EXAMINER'S DUTIES, JURISDICTIONAL REQUIREMENTS AND SOURCES OF INFORMATION, AND TECHNICAL ASSISTANCE USED IN THE DEVELOPMENT OF POLICIES AND PROCEDURES (8.2.2)</p>
REQUISITE SKILL:	<p>THE ABILITY TO CONDUCT CODE-RELATED RESEARCH, APPLY CODES AND STANDARDS, AND MAKE DECISIONS (7.2.4)</p> <p>THE ABILITY TO ORGANIZE, COMMUNICATE, AND DESIGN CHECKLISTS (8.2.1)</p> <p>THE ABILITY TO RECOGNIZE PROBLEMS, RESOLVE CONFLICTS, AND MAKE DECISIONS (8.2.2)</p>

PERFORMANCE GOAL

GIVEN:

1. A summary of an up-to-date library of codes, standards, ordinances, and checklists necessary to perform an adequate plan review
2. A summary of procedures to create plan review checklists and forms
3. A summary of procedures to develop and maintain policies and procedures for administering plan review functions

PERFORMANCE: (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

1. Describe the procedures for maintaining a library of codes, standards, ordinances, and checklists necessary to perform an adequate plan review, which at a minimum shall include:
 - Current codes, standards, and ordinances legally adopted by the jurisdiction
 - Historic codes, standards, and ordinances legally adopted by the jurisdiction
2. Describe the procedures for developing and maintaining policies and procedures for administering plan review functions, which at a minimum **shall** include:
 - Consistent application
 - Identifying impact on other governmental agencies
 - Meeting legal obligations of the jurisdiction
 - Sources of information
 - Technical assistance used in the development



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3. Describe and demonstrate creating plan review checklists and forms, which at a minimum **shall** include:
- Addressing key issues
 - Clearly expressing code requirements of the jurisdiction
 - Logical and complete format

STANDARD:

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy

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SECTION 2: PLANS REVIEW FOR THE PLANS EXAMINER

PE 2-3: DESCRIBE THE PLAN SUBMITTAL PROCESS

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTIONS 7.2.1, 7.2.3, 8.3.1, AND 8.3.5
LEVEL:	II
REQUISITE KNOWLEDGE:	<p>CODES AND STANDARDS, LEGAL REQUIREMENTS FOR PLAN REVIEW REPORTS, AND ACCEPTED PRACTICES, POLICIES, AND PROCEDURES OF THE JURISDICTION (7.2.1)</p> <p>PLAN REVIEW POLICIES AND PROCEDURES OF THE JURISDICTION (7.2.3)</p> <p>FIRE PROTECTION CONSTRUCTION FEATURES, CODES AND STANDARDS, PRELIMINARY PLAN REVIEW PROCEDURES OF THE JURISDICTION, AND THE APPROVAL PROCESS FOR ALTERNATIVE FIRE PROTECTION METHODOLOGIES (8.3.1)</p> <p>APPLICABLE CODES AND STANDARDS FOR FIRE PROTECTION SYSTEMS, BASIC PHYSICAL SCIENCE AS IT RELATES TO FIRE BEHAVIOR AND FIRE SUPPRESSION, HYDRAULIC THEORY, HYDRAULIC CALCULATIONS FOR FIRE SUPPRESSION, MATERIAL LISTING REQUIREMENTS, MATERIAL SPECIFICATIONS, INSTALLATION TECHNIQUES, ACCEPTANCE INSPECTION AND TESTING OF COMPLETED INSTALLATIONS, CONSTRUCTION TYPES AND TECHNIQUES, AND CLASSIFICATION OF OCCUPANCIES (8.3.5)</p>
REQUISITE SKILL:	<p>THE ABILITY TO CONDUCT CODE-RELATED RESEARCH AND WRITE REPORTS (7.2.1)</p> <p>THE ABILITY TO REVIEW APPLICATIONS FOR COMPLETENESS (7.2.3)</p> <p>THE ABILITY TO EVALUATE CODE COMPLIANCE OF CONCEPTUAL DESIGNS (8.3.1)</p> <p>THE ABILITY TO REVIEW SPECIFICATIONS AND READ PLANS , CLASSIFY OCCUPANCIES, INTERPRET CODES AND STANDARDS, AND VERIFY HYDRAULIC CALCULATIONS (8.3.5)</p>

PERFORMANCE GOAL

GIVEN:

1. A summary of the importance and purpose of construction plans and specifications
2. A summary the predesign review process
3. A summary the abbreviations and symbols used on submitted plans and specifications
4. A summary of the units of measurement/scales used for the plan review process and their relationship to the submitted drawings and specifications
5. A summary of the critical specific elements of a complete submittal
6. A summary of the critical supplemental documentation, plans, specifications, test reports, cut-sheets, and calculation sheets that may be included, as part of the plan submittal, or be deferred to a later review time

PERFORMANCE: (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

1. Describe the importance and purpose of construction plans and specifications
2. Describe the plan review process, which at a minimum **shall** include:
 - Occupancy classification
 - Allowable height and area
 - Construction type
 - Required fire protection features
 - Location on site

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- Site access
 - Site water supply
 - Special detailed occupancy requirements
 - Means of egress
 - Fire resistive construction
 - Project environmental risks such as wildland urban interface
 - Special requirements based on local project approval process
3. Describe the abbreviations and symbols used on submitted plans and specifications
 4. Describe the units of measurement/scales used for the plan review process and their relationship to the submitted drawings and specifications
 5. Describe the procedures for evaluating the critical specific elements of a complete submittal, which at a minimum **shall** include:
 - Architectural
 - Civil/Site
 - Electrical
 - Fire protection
 - Fire safety during construction and demolition
 - Life safety systems
 - Local requirements
 - Mechanical
 - Plumbing
 - Preliminary design presentation
 - Structural
 - Wildland urban interface management plan
 6. Describe the procedures for evaluating the critical supplemental documentation, plans, and specifications, test reports, cut-sheets, and calculation sheets that may be included, as part of the plan submittal, or be deferred to a later review time

STANDARD:

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy



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SECTION 2: PLANS REVIEW FOR THE PLANS EXAMINER

PE 2-4: DESCRIBE EVALUATING SITE-PLOT-UTILITY PLANS AND WILDLAND URBAN INTERFACE LANDSCAPE PLANS

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTIONS 7.2.3, 7.3.6, AND 7.3.7 AND THE <i>STATE FIRE MARSHAL</i>
LEVEL:	II
REQUISITE KNOWLEDGE:	PLAN REVIEW POLICIES AND PROCEDURES OF THE JURISDICTION. (7.2.3) STANDARD CIVIL ENGINEERING SYMBOLS; TYPES OF WATER SUPPLY AND DISTRIBUTION SYSTEMS; WATER DISTRIBUTION SYSTEM TEST METHODS; CHARACTERISTICS OF PUBLIC AND PRIVATE WATER SUPPLY SYSTEMS, WATER METERS, BACKFLOW PREVENTION, AND OTHER DEVICES THAT CAN IMPACT ON FIRE FLOW; THE EFFECTS OF FRICTION LOSS AND ELEVATION ON WATER FLOW; POTENTIAL IMPACT OF STATE HEALTH REGULATIONS ON FIRE FLOW; AND THE APPLICABLE CODES AND STANDARDS RELATED TO FIRE FLOW IN THE JURISDICTION. (7.3.6) OPERATING REQUIREMENTS FOR FIRE DEPARTMENT APPARATUS, PLANNING AND ZONING REQUIREMENTS, AND EMERGENCY ACCESS REQUIREMENTS OF APPLICABLE CODES AND STANDARDS. (7.3.7)
REQUISITE SKILL:	THE ABILITY TO REVIEW APPLICATIONS FOR COMPLETENESS. (7.2.3) THE ABILITY TO INTERPRET FIRE FLOW TEST RESULTS, DETERMINE FIRE HYDRANT LOCATIONS AND SPACING, AND READ FIRE FLOW GRAPHS. (7.3.6) THE ABILITY TO INTERPRET AND USE PLAN SCALE. (7.3.7)

PERFORMANCE GOAL

GIVEN:

1. A summary with a basic set of factual documents used during the review process for site, plot, in urban settings and hazardous fire area plans for proposed building construction in the *State Responsibility Area (SRA) and the Local Responsibility Area (LRA)*
2. A summary of the terminology relating to grading, landscaping, and hazardous fire area
3. A summary of the requirements for fire and emergency vehicle access roads for: turnarounds, vertical clearances, horizontal clearances, weight restrictions, obstructions, and water supply
4. A summary of the need for easements and restrictions
5. A summary of facts pertaining to civil/utility drawings and the information necessary for compliance
6. A summary of landscape plans and the need to verify fire and life safety compliance

PERFORMANCE: (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

1. Describe and evaluate required water delivery infrastructure requirements for development within the jurisdiction, which at a minimum **shall** include:
 - Fire flow calculations
 - Hydrant locations
 - Public and private
 - Rural private

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2. Describe and evaluate required emergency vehicle access infrastructure requirements of the jurisdiction, which at a minimum **shall** include:
 - Bridges
 - Emergency vehicle access to open areas
 - Exit discharge
 - Gates
 - Grade determination
 - Load-bearing capability
 - Roadway width and clearance
 - Secondary access
 - Traffic calming
3. Describe and evaluate the wildland urban interface codes, standards, and policies of the jurisdiction applicable to landscape plans, which at a minimum **shall** include:
 - Vegetation management
 - Fuel modification
 - Vegetation maintenance
 - Material and construction methods for external wildfire exposure
4. Describe and evaluate required and/or applicable permits for activities within the wildland urban interface, which at a minimum **shall** include:
 - Building construction features
 - Exterior auxiliary structures
 - ◆ Ancillary structures
 - ◆ Decks
 - ◆ Fences
 - Local Responsibility Area (LRA)
 - Other governmental agency restrictions
 - Set-back restrictions
 - State Responsibility Area (SRA)

STANDARD:

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy

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SECTION 2: PLANS REVIEW FOR THE PLANS EXAMINER

PE 2-5: DESCRIBE EVALUATING ARCHITECTURAL AND STRUCTURAL PLANS FOR REGULATORY COMPLIANCE

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTIONS 7.3.2, 7.3.3, 7.3.4, 7.3.5, AND 8.3.9
LEVEL:	II
REQUISITE KNOWLEDGE:	<p>PLAN REVIEW POLICIES AND PROCEDURES OF THE JURISDICTION (7.2.3)</p> <p>TYPES OF CONSTRUCTION, FIRE-RATED CONSTRUCTION COMPONENTS, TYPICAL BUILDING CONSTRUCTION METHODS AND MATERIALS, AND CODE REQUIREMENTS RELATED TO CONSTRUCTION TYPES (7.3.3)</p> <p>HOW TO CALCULATE OCCUPANT LOAD FOR AN OCCUPANCY AND FOR BUILDING USE, AND CODE REQUIREMENTS, REGULATIONS, OPERATIONAL FEATURES, AND FIRE HAZARDS PRESENTED BY VARIOUS OCCUPANCIES (7.3.4)</p> <p>APPLICABLE CODE REQUIREMENTS FOR MEANS OF EGRESS ELEMENTS, OCCUPANCY EGRESS REQUIREMENTS, AND THE RELATIONSHIP OF FIXED FIRE PROTECTION SYSTEMS TO EGRESS REQUIREMENTS (7.3.5)</p> <p>APPLICABLE CODES AND STANDARDS ADOPTED BY THE JURISDICTION, IDENTIFICATION OF STANDARD SYMBOLS USED IN PLANS, AND FIELD VERIFICATION PRACTICES (8.3.9)</p>
REQUISITE SKILL:	<p>THE ABILITY TO REVIEW APPLICATIONS FOR COMPLETENESS (7.2.3)</p> <p>THE ABILITY TO READ PLANS, DETERMINE CONSTRUCTION TYPES, AND CONDUCT CODE-RELATED RESEARCH (7.3.3)</p> <p>THE ABILITY TO CALCULATE OCCUPANT LOADS, IDENTIFY OCCUPANCY FACTORS RELATED TO VARIOUS OCCUPANCY TYPES, AND USE MEASURING TOOLS (7.3.4)</p> <p>THE ABILITY TO DETERMINE EGRESS REQUIREMENTS BASED ON OCCUPANT LOAD AND RESEARCH CODES (7.3.5)</p> <p>THE ABILITY TO READ PLANS AND RESEARCH CODES AND STANDARDS (8.3.9)</p>

PERFORMANCE GOAL

GIVEN:

1. A basic set of construction (factual) documents used during the review of architectural and structural plans for fire and life safety compliance
2. A summary of relevant terminology and symbols
3. A summary of plan review elements
4. A summary of methods for protecting structures during seismic events
5. A summary of methods of fire protection for structural components

PERFORMANCE: (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

1. Describe relevant terminology and symbols, which at a minimum **shall** include:
 - Different types of structural loading
 - Live and dead loads
 - Seismic loads
 - Exterior elevation review for new buildings
 - Load bearing
 - Structural design

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- Columns
 - Beams
 - Girders
 - Trusses
 - Primary/secondary structural members
 - Structural framing
2. Describe occupancy classifications consistent with the codes and standards of the jurisdiction
 3. Describe construction types consistent with the codes and standards of the jurisdiction, which at a minimum **shall** include:
 - Heights and areas
 - Site location
 - Stories
 4. Describe and evaluate the impacts of automatic fire sprinkler systems installed throughout, which **shall** at a minimum include:
 - Allowable area
 - Construction type
 - Exiting
 - Building height / stories
 - One-hour construction
 5. Describe and evaluate the maximum allowable occupant loading consistent with the codes and standards of the jurisdiction
 6. Describe and evaluate egress elements consistent with the codes and standards of the jurisdiction
 7. Describe and evaluate elements of fire protection features of building systems as required by the codes and standards of the jurisdiction, which may include:
 - Fire barriers
 - Fire walls
 - Fire protection for structural components
 - Other passive fire protection features
 8. Describe and evaluate elements of construction for projects within a wildland urban interface area when required by codes, standards, and ordinances, and policies of the jurisdiction, which at a minimum **shall** include:
 - Ignition-resistant construction
 - Roofing
 - Vents
 - Exterior coverings
 - Exterior doors and windows



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SECTION 2: PLANS REVIEW FOR THE PLANS EXAMINER

STANDARD:

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy

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SECTION 2: PLANS REVIEW FOR THE PLANS EXAMINER

PE 2-6: DESCRIBE EVALUATING MECHANICAL AND ELECTRICAL PLANS FOR REGULATORY COMPLIANCE

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTIONS 7.2.3, 7.3.10, 8.3.2, 8.3.5, AND 8.3.11
LEVEL:	II
REQUISITE KNOWLEDGE:	<p>PLAN REVIEW POLICIES AND PROCEDURES OF THE JURISDICTION (7.2.3)</p> <p>APPLICABLE CODES AND STANDARDS FOR FIRE PROTECTION SYSTEMS, BASIC PHYSICAL SCIENCE AS IT RELATES TO FIRE BEHAVIOR AND FIRE SUPPRESSION, BASIC SYSTEM DESIGN CRITERIA, MATERIAL LISTING REQUIREMENTS, MATERIAL SPECIFICATIONS, INSTALLATION TECHNIQUES ACCEPTANCE INSPECTION/TESTING OF COMPLETED INSTALLATIONS, CONSTRUCTION TYPES AND TECHNIQUES, AND CLASSIFICATION OF OCCUPANCIES (7.3.10)</p> <p>FIRE PROTECTION CONSTRUCTION FEATURES, SUCH AS RATED ASSEMBLIES, FIRE STOPS, DRAFT STOPPING, DRAFT CURTAINS, AND OTHER PASSIVE FIRE PROTECTION FEATURES; AND FIRE TEST METHODS (8.3.2)</p> <p>APPLICABLE CODES AND STANDARDS FOR FIRE PROTECTIONS SYSTEMS, BASIC PHYSICAL SCIENCE AS IT RELATES TO FIRE BEHAVIOR AND FIRE SUPPRESSION, HYDRAULIC CALCULATIONS FOR FIRE SUPPRESSION, MATERIAL LISTING REQUIREMENTS, MATERIAL SPECIFICATIONS, INSTALLATION TECHNIQUES, ACCEPTANCE INSPECTION AND TESTING OF COMPLETED INSTALLATIONS, CONSTRUCTION TYPES AND TECHNIQUES AND CLASSIFICATION OF OCCUPANCIES (8.3.5)</p> <p>TYPES, INSTALLATION, MAINTENANCE, AND USE OF BUILDING SERVICE EQUIPMENT, SMOKE CONTROL SYSTEMS, INSTALLATION OF KITCHEN COOKING EQUIPMENT (INCLUDING HOODS AND DUCTS), LAUNDRY CHUTES, ELEVATORS, AND ESCALATORS, AND APPLICABLE CODES AND STANDARDS ADOPTED BY THE JURISDICTION (8.3.11)</p>
REQUISITE SKILL:	<p>THE ABILITY TO REVIEW APPLICATIONS FOR COMPLETENESS (7.2.3)</p> <p>THE ABILITY TO REVIEW SPECIFICATIONS, READ PLANS, CLASSIFY OCCUPANCIES, AND APPLY STANDARDS (7.3.10)</p> <p>THE ABILITY TO VERIFY THE RATING OF AN ASSEMBLY USING REFERENCE MATERIALS (8.3.2)</p> <p>THE ABILITY TO REVIEW SPECIFICATIONS AND READ PLANS, CLASSIFY OCCUPANCIES, INTERPRET CODES AND STANDARDS, AND VERIFY HYDRAULIC CALCULATIONS (8.3.5)</p> <p>THE ABILITY TO APPLY, READ, AND INTERPRET HVAC PLANS (8.3.11)</p>

PERFORMANCE GOAL

GIVEN:

1. A summary of relevant terminology and symbols
2. A basic set of construction (factual) documents used during the review of mechanical, plumbing, natural gas, fuel gas, and electrical plans for fire and life safety compliance
3. A basic set of factual documents regarding hazardous location wiring and methods of protection
4. A summary with a basic set of factual documents regarding hazardous processing and piping of such systems
5. A summary of the requirements for piping of such systems and methods for protecting the piping from physical damage

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6. A summary of the terminology and methods for “through-stop” and “membrane-stop” fire protection for piping
7. A summary of the terminology, requirements, and methods for HVAC systems for buildings including: fire and smoke dampers, passive smoke control, mechanical smoke control, and smoke removal systems
8. A summary of the methods for hazardous vapor removal through HVAC ducting
9. A summary for supporting HVAC ducting
10. A summary of the different forms of electrical distribution services
11. A summary of the requirements for electrical distribution systems and methods for protecting both below ground and above ground wiring from physical damage

PERFORMANCE: (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

1. Describe relevant terminology and symbols, which at a minimum **shall** include:
 - Electrical distribution systems
 - Heating ventilation and air conditioning systems
 - Plumbing and gas systems
2. Describe and evaluate fire protection interface of the electrical system, which at a minimum **shall** include:
 - Electrical distribution systems
 - Egress lighting
 - Emergency power systems and generators
 - Grounding and lightning protection
 - Interlocks
 - Photovoltaic systems
 - Plenum-rated cabling
 - Shunt trip breakers
 - Uninterruptable power supply and battery banks
3. Describe and evaluate fire protection interface of the mechanical systems, which at a minimum **shall** include:
 - Fire and smoke dampers
 - Interlocks
 - Smoke control
 - Smoke evacuation (removal)
4. Describe and evaluate through-stop and fire-stop penetration protection for building utilities

STANDARD:

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy

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PE 2-7: DESCRIBE EVALUATING FIRE PROTECTION SYSTEM PLANS FOR REGULATORY COMPLIANCE

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTIONS 7.3.1, 8.3.5, 8.3.7 AND THE <i>STATE FIRE MARSHAL</i>
LEVEL:	II
REQUISITE KNOWLEDGE:	<p>APPLICABLE CODE REQUIREMENTS FOR LIFE SAFETY SYSTEMS, INTERIOR FINISH, AND THIRD-PARTY TESTING AND EVALUATION (7.3.1)</p> <p>APPLICABLE CODES AND STANDARDS FOR FIRE PROTECTIONS SYSTEMS, BASIC PHYSICAL SCIENCE AS IT RELATES TO FIRE BEHAVIOR AND FIRE SUPPRESSION, HYDRAULIC THEORY, HYDRAULIC CALCULATIONS FOR FIRE SUPPRESSION, MATERIAL LISTING REQUIREMENTS, MATERIALS SPECIFICATIONS, INSTALLATION TECHNIQUES, ACCEPTANCE INSPECTION AND TESTING OF COMPLETED INSTALLATIONS, CONSTRUCTION TYPES AND TECHNIQUES, AND CLASSIFICATION OF OCCUPANCIES (8.3.5)</p> <p>THE FIRE AND LIFE SAFETY OBJECTIVES OF THE JURISDICTION AND FIRE PROTECTION AND LIFE SAFETY SYSTEMS AND THEIR INTEGRATION (8.3.7)</p>
REQUISITE SKILL:	<p>THE ABILITY TO READ BASIC FLOOR PLANS OR SHOP DRAWINGS, AND IDENTIFY SYMBOLS USED AND APPLY CODES AND STANDARDS (7.3.1)</p> <p>THE ABILITY TO REVIEW SPECIFICATIONS AND READ PLANS, CLASSIFY OCCUPANCIES, INTERPRET CODES AND STANDARDS, AND VERIFY HYDRAULIC CALCULATIONS (8.3.5)</p> <p>THE ABILITY TO EVALUATE SYSTEM INTEGRATION (8.3.7)</p>

PERFORMANCE GOAL

GIVEN:

1. A basic set of construction (factual) documents used during the review of fire protection systems, (fire alarm, fire sprinkler, standpipes, automatic fire suppression and water supply) for fire and life safety compliance
2. A summary of the terminology and components
3. A summary of the requirements for reviewing fire sprinkler systems plans
4. A summary of the requirements for reviewing fire standpipe systems
5. A summary of the requirements for reviewing fire alarm systems
6. A summary of the requirements for elevator recall
7. A summary of the requirements for fire control room
8. A summary of the requirements for automatic fire suppression systems for kitchen cooking application and hazardous locations
9. A summary of smoke migration and methods for interaction with smoke control or removal systems

PERFORMANCE: (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

1. Describe relevant terminology and components, which at a minimum **shall** include:
 - Building communication systems
 - Elevator systems
 - Fire alarm systems



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- Fire control rooms
 - Fire pumps
 - Fire standpipe systems
 - Fire suppression systems
 - Special extinguishing systems
2. Describe and evaluate engineered and pre-engineered fixed extinguishing systems plans
 3. Describe and evaluate the requirements for automatic fire suppression systems for kitchen cooking applications and hazardous locations
 4. Describe and evaluate smoke migration and methods for interaction with smoke control or removal systems

STANDARD:

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy

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PE 2-8: DESCRIBE EVALUATING OTHER HAZARDOUS PROCESSES AND OPERATIONS PLANS FOR REGULATORY COMPLIANCE

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTIONS 8.3.3, 8.3.4, 8.3.8, AND 8.3.10
LEVEL:	II
REQUISITE KNOWLEDGE:	HAZARDS AND APPLICABLE STANDARDS FOR ARRANGEMENT AND PROTECTION OF VARIOUS OPERATIONS TO BE USED IN COMMERCIAL AND INDUSTRIAL OCCUPANCIES; CONSTRUCTION TYPES; BASIC PHYSICAL SCIENCE AS IT RELATES TO FIRE BEHAVIOR AND FIRE SUPPRESSION, INCLUDING MATHEMATICS, PHYSICS, AND CHEMISTRY; AND REFERENCE MATERIALS RELATED TO FIRE HAZARD PROPERTIES OF FLAMMABLE LIQUIDS, GASES, AND VOLATILE SOLIDS (8.3.3) PROPERTIES OF FLAMMABLE AND COMBUSTIBLE LIQUIDS AND GASES; APPLICABLE STANDARDS FOR THE HANDLING, STORAGE, ARRANGEMENT, AND PROTECTION OF FLAMMABLE AND COMBUSTIBLE LIQUIDS AND GASES; BASIC PHYSICAL SCIENCE AS IT RELATES TO FIRE BEHAVIOR AND FIRE SUPPRESSION; AND REFERENCE MATERIALS RELATED TO FLAMMABLE AND COMBUSTIBLE LIQUIDS AND GASES (8.3.4) PROPERTIES OF HAZARDOUS MATERIALS AND APPLICABLE STANDARDS FOR HANDLING, STORAGE, ARRANGEMENT, AND PROTECTION OF HAZARDOUS MATERIALS; BASIC PHYSICAL SCIENCE AS IT RELATES TO FIRE BEHAVIOR AND FIRE SUPPRESSION; AND REFERENCE MATERIALS RELATED TO HAZARDOUS MATERIALS (8.3.8) APPLICATION OF CODES AND STANDARDS ADOPTED BY THE JURISDICTION FOR SPECIAL STORAGE ARRANGEMENTS (8.3.10)
REQUISITE SKILL:	THE ABILITY TO READ PLANS AND INTERPRET CODES AND STANDARDS (8.3.3) THE ABILITY TO DETERMINE THE CLASSIFICATION OF FLAMMABLE AND COMBUSTIBLE LIQUIDS AND GASES USING REFERENCE MATERIALS ON FIRE PROTECTION (8.3.4) THE ABILITY TO DETERMINE THE CLASSIFICATION OF HAZARDOUS MATERIALS USING REFERENCE MATERIALS (8.3.8) THE ABILITY TO DETERMINE COMMODITY TYPES AND STORAGE ARRANGEMENTS (8.3.10)

PERFORMANCE GOAL

GIVEN:

1. A basic set of factual documents used during the review of hazardous materials processing and storage, including flammable and combustible liquids, solids, and gases
2. A summary of the requirements for exterior and interior manufacturing, processing, use, storage, handling, and dispensing of hazardous materials, including flammable and combustible liquids, solids, and gases
3. A summary of the requirements for the application of spraying and dipping of flammable and combustible liquids
4. A summary of the requirements for open and closed systems using hazardous materials including flammable and combustible liquids, solids, and gases
5. A summary of the terminology for identification and special marking for buildings/areas storing hazardous materials
6. A summary of hazardous materials storage as it relates to control areas
7. A summary of the need for secondary containment for hazardous materials

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8. A summary of medical and laboratory gas systems
9. A summary of refrigerant systems
10. A summary of alternative fuels used for motorized vehicles

PERFORMANCE: *(IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)*

1. Describe and evaluate a basic set of factual documents used during the review of hazardous materials processing and storage, including flammable and combustible liquids, solids, and gases
2. Describe and evaluate the requirements for exterior and interior manufacturing, processing, use, storage, handling, and dispensing of hazardous materials, including flammable and combustible liquids, solids, and gases
3. Describe and evaluate the requirements for the application of spraying and dipping of flammable and combustible liquids
4. Describe and evaluate the requirements for open and closed systems using hazardous materials including flammable and combustible liquids, solids, and gases
5. Describe and evaluate the terminology for identification and special marking for buildings/areas storing hazardous materials
6. Describe and evaluate hazardous materials storage as it relates to control areas
7. Describe and evaluate secondary containment for hazardous materials
8. Describe and evaluate medical and laboratory gas systems
9. Describe and evaluate refrigerant systems
10. Describe and evaluate alternative fuels used for motorized vehicles

STANDARD:

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy

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SECTION 2: PLANS REVIEW FOR THE PLANS EXAMINER

PE 2-9: DESCRIBE EVALUATING ALTERNATE DESIGN METHODS

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTIONS 8.3.6 AND 8.3.12
LEVEL:	II
REQUISITE KNOWLEDGE:	HOW A BUILDING SHOULD PERFORM UNDER ADVERSE CONDITIONS, INCLUDING THE OBJECTIVES AND PERFORMANCE REQUIREMENTS REFLECTING THE LEVEL OF SAFETY REQUIRED BY THE JURISDICTION OR OTHER PERFORMANCE-BASED REGULATION FOR A PROCESS OR OPERATION (8.3.6) FIRE PROTECTION CONSTRUCTION FEATURES, CODES AND STANDARDS, PRELIMINARY PLAN REVIEW PROCEDURES OF THE JURISDICTION, THE APPROVAL PROCESS FOR ALTERNATIVE PERFORMANCE-BASED FIRE PROTECTION METHODOLOGIES, PERFORMANCE-BASED CONCEPTS, THE DEVELOPMENT OF APPROPRIATE INPUT VALUES BASED UPON THE BUILDING TYPE AND ANTICIPATED USE, AND THE JURISDICTIONAL AND CODE REQUIREMENTS (8.3.12)
REQUISITE SKILL:	THE ABILITY TO EVALUATE ALTERNATIVE PROPOSALS TO PRESCRIPTIVE CODES AND STANDARDS (8.3.6) THE ABILITY TO RECOGNIZE DEVIATIONS FROM THE PRESCRIPTIVE CODE, RECOGNIZE AND INTERPRET PERFORMANCE-BASED PROPOSALS, AND DETERMINE AND PRESENT APPROPRIATE DESIGN INPUT VALUES AND PARAMETERS BASED UPON THE BUILDING TYPE AND ANTICIPATED USE (8.3.12)

PERFORMANCE GOAL

GIVEN:

1. A summary with a basic set of factual documents used during the review of a proposed alternate method of design or protection
2. A summary of the requirements for determining equivalences and alternate methods for fire protection and building systems
3. A summary of the requirements for the appeals board process
4. A summary of the requirements for performance based design process, application process, and acceptance process

PERFORMANCE: (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

1. Describe and evaluate a basic set of factual documents used during the review of a proposed alternate method of design or protection
2. Describe and evaluate the requirements for determining equivalences and alternate methods for fire protection and building systems
3. Describe and evaluate the requirements for the appeals board process
4. Describe and evaluate the requirements for performance based design process, application process, and acceptance process

STANDARD:

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy



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SECTION 2: PLANS REVIEW FOR THE PLANS EXAMINER

PE 2-10: DESCRIBE EVALUATING RENOVATIONS, TENANT IMPROVEMENTS, AND TEMPORARY STRUCTURES

AUTHORITY:	NFPA 1031 PROFESSIONAL QUALIFICATIONS FOR FIRE INSPECTOR AND PLAN EXAMINER (2009): SECTIONS 8.2.1 AND 8.3.1
LEVEL:	II
REQUISITE KNOWLEDGE:	PLAN REVIEW ELEMENTS REQUIRED BY CODES, STANDARDS, POLICIES, AND PROCEDURES OF THE JURISDICTION (8.2.1) FIRE PROTECTION CONSTRUCTION FEATURES, CODES AND STANDARDS, PRELIMINARY PLAN REVIEW PROCEDURES OF THE JURISDICTION, AND THE APPROVAL PROCESS FOR ALTERNATIVE FIRE PROTECTION METHODOLOGIES (8.3.1)
REQUISITE SKILL:	THE ABILITY TO ORGANIZE, COMMUNICATE, AND DESIGN CHECKLISTS (8.2.1) THE ABILITY TO EVALUATE CODE COMPLIANCE AND CONCEPTUAL DESIGNS (8.3.1)

PERFORMANCE GOAL

GIVEN:

1. A basic set of factual documents used during the review of a proposed tenant improvement or change in occupancy classification
2. A summary of the requirements for determining when damage repair is necessary and the process for application to repair or restore a building to its use
3. A summary of the requirements for increasing the fire protection systems in existing building under tenant improvement or repair
4. A summary of the requirements for historic building under repair or renovation
5. A summary of the requirements for tents and membrane structures
6. A summary of the requirements for demolition and fire safety during construction

PERFORMANCE: (IN ACCORDANCE WITH DEPARTMENT POLICIES AND STANDARD OPERATING PROCEDURES)

1. Describe and evaluate a proposed tenant improvement or change in occupancy classification
2. Describe and evaluate the requirements for determining damage repair if necessary and the process for application to repair or restore a building to its use
3. Describe and evaluate the requirements for increasing the fire protection systems in existing building under tenant improvement or repair
4. Describe and evaluate the requirements for historic building under repair or renovation
5. Describe and evaluate the requirements for tents and membrane structures
6. Describe and evaluate the requirements for demolition and fire safety during construction

STANDARD:

By successfully completing all assignments and activities, passing all performance tests, and passing all written tests with a minimum of 80% accuracy

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SECTION 11: INVESTIGATION FOR THE FIRE MARSHAL

REFERENCE RESOURCES

- ☐ An Introduction to Fire Dynamics, Dougal Drysdale, Wiley
- ☐ Backflow Prevention and Cross-connection Control (M14), American Water Works Association
- ☐ Brannigan's Building Construction for the Fire Service, Francis L. Brannigan and Glenn P. Corbett, Jones & Bartlett
- ☐ Building Department Administration, International Conference of Building Officials
- ☐ California Building Code, Building Standards Commission/International Code Council
- ☐ California Code of Regulations, Title 19: Public Safety
- ☐ California Code of Regulations, Title 24: California Building Standards Code, Building Standards Commission
- ☐ California Fire Code, Building Standards Commission/International Code Council
- ☐ California Fire Laws with Building Code Statutes, LexisNexis
- ☐ California Health and Safety Code
- ☐ California Penal Code
- ☐ California Public Resources Code
- ☐ California Rulemaking Law: under the Administrative Procedure Act, Office of Administrative Law
- ☐ Distribution System Requirements for Fire Protection (M31), American Water Works Association
- ☐ Emergency Response Guidebook, Department of Transportation
- ☐ Essentials of Fire Fighting, IFSTA/FPP
- ☐ Fire Inspection and Code Enforcement, IFSTA/FPP
- ☐ Fire Investigator, IFSTA/FPP
- ☐ Fire Prevention: A Comprehensive Approach, Jim Crawford
- ☐ Fire Prevention: Inspection and Code Enforcement, David Diamontes
- ☐ Fire Protection Handbook, NFPA
- ☐ Fire Service Administration, NFPA
- ☐ Fire Suppression Rating Schedule, Insurance Services Office
- ☐ Hazardous Materials First Responder Awareness, Office of Emergency Services/California Specialized Training Institute
- ☐ Industrial Fire Protection Handbook, R. Craig Schroll
- ☐ International Building Code, International Code Council
- ☐ International Fire Code, International Code Council
- ☐ International Fire Code and Commentary, International Code Council
- ☐ Introduction to Fire Protection Law, NFPA
- ☐ Legal Considerations for Fire and Emergency Services, J. Curtis Varone
- ☐ Kirk's Fire Investigation, John DeHaan, Pearson Prentice Hall

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SECTION 11: INVESTIGATION FOR THE FIRE MARSHAL

- ☐ Management in the Fire Service, NFPA
- ☐ Managing the Fire Service, ICMA
- ☐ NFPA 10: Portable Fire Extinguishers
- ☐ NFPA 13: Installation of Sprinkler Systems
- ☐ NFPA 14: Installation of Standpipe and Hose Systems
- ☐ NFPA 20: Installation of Stationary Pumps for Fire Protection
- ☐ NFPA 24: Installation of Private Fire Service Mains and Their Appurtenances
- ☐ NFPA 25: Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, California Edition
- ☐ NFPA 72: National Fire Alarm Code
- ☐ NFPA 92A: Smoke-Control Systems Utilizing Barriers and Pressure Differences
- ☐ NFPA 92B: Smoke Management Systems in Malls, Atria, and Large Spaces
- ☐ NFPA 96: Ventilation Control and Fire Protection of Commercial Cooking Operations
- ☐ NFPA 99: Health Care Facilities
- ☐ NFPA 101: Life Safety Code
- ☐ NFPA 110: Emergency and Standby Power Systems
- ☐ NFPA 472: Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents
- ☐ NFPA 704: Identification of the Hazards of Materials for Emergency Response
- ☐ NFPA 1141: Fire Protection Infrastructure for Land Development in Suburban and Rural Areas
- ☐ NFPA 1142: Water Supplies for Suburban and Rural Fire Fighting
- ☐ Performance-based Building Design Concepts, International Code Council
- ☐ Plans Review Manual, International Conference of Building Officials
- ☐ Plans Examiner for Fire and Emergency Services, IFSTA/FPP, First Edition
- ☐ Principles of Fire Behavior, James G. Quintiere, Delmar, First Edition Public Information Officer, IFSTA/FPP
- ☐ Public Fire Education Planning: A 5-Step Process, National Fire Academy
- ☐ S-203 Introduction to Incident Information, National Wildfire Coordinating Group
- ☐ S-403 Information Officer, National Wildfire Coordinating Group
- ☐ The Architect's Handbook of Professional Practice, Joseph A. Demkin, John Wiley & Sons
- ☐ United States Code, Title 5, Part I, Chapter 5, Subsection II, Section 552 (public information, agency rules, opinions, orders, records, and proceedings)
- ☐ United States Code, Title 18, Section 841 and published pursuant to the Code of Federal Regulations, Title 27, Section 555.23
- ☐ Urban Wildland Interface Code, International Code Council